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Chronic CAD/Stable Ischemic Heart Disease

PERFORMANCE OF LEFT VENTRICULAR EJECTION FRACTION ON PATIENTS WITH STABLE MULTIVESSEL CORONARY DISEASE SUBMITTED TO MEDICINE, ANGIOPLASTY OR SURGERY: 10 YEARS FOLLOW-UPFROM MASS II TRIAL

ACC Moderated Poster Contributions
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Session Title: Fresh CABG: Good for SIHD?
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Background: Coronary artery bypass graft (CABG) and percutaneous coronary intervention (PCI) are assumed as effective therapeutic options for the protection of the ischemic myocardium. However, it is not established if those procedures are effective for left ventricular ejection fraction (LVEF) preservation. In this setting, we evaluated the evolution of LVEF in patients with stable multivessel coronary disease, submitted to CABG, PCI or medical treatment (MT) alone, after ten years of follow-up.

Methods: Echocardiography was performed on patients participants of MASS II trial, previously to randomization for CABG, PCI or MT, and after 10 years. LVEF was measured by the biplane method (Simpson), when regional wall-motion abnormalities were present, or by the Teichholz method.

Results: After a follow-up of 10.32 (±1.43) years, 350 patients had LVEF reassessed: 108 patients on MT, 111 on CABG and 131 on PCI group. Main baseline characteristics and the occurrence of AMI were similar among the three groups. There was no difference of LVEF either at the beginning (0.61 + 0.07, 0.61 + 0.08 e 0.61 + 0.09 respectively for PCI, CABG and MT, p=0.675) and the end of follow up (0.56 + 0.11, 0.55 + 0.11 e 0.55 + 0.12 respectively for PCI, CABG and MT, p=0.675). The impact of other variables over LVEF evolution, such as gender, age, diabetes and arterial pattern, were also analyzed, and no relevance was demonstrated. However, the presence of previous AMI (OR 2.50, 95% CI 1.40-4.45; p= 0.0007) and the occurrence of AMI during follow up (OR 2.73, 95% IC 1.25-5.92; p=0.005) were associated with an increased risk of developing LVEF < 45%. Also, AMI during follow-up was responsible for a greater reduction of LVEF (reduction delta of 18.29 ± 21.22% and 6.63 ± 18.91%, respectively for patients with and without AMI, p=0.001).

Conclusion: Thus, compared with PCI or CABG patients, patients in the medical group with unprotected coronary artery disease by mechanical revascularization without adverse cardiac events showed no differences in the left ventricular function after 10 years of follow up. Moreover, whatever of interventional therapeutic strategies applied, the left ventricular function remained unchanged in absence of MACE.